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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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|-----------------|-------------|----------------------|---------------------|------------------|

10/808,958

03/25/2004

Stefan Bohm

P04,0091

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07/24/2008

SCHIFF HARDIN, LLP
PATENT DEPARTMENT
6600 SEARS TOWER
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EXAMINER

LU, TOM Y

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

07/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/808,958 | Applicant(s) BOHM ET AL. | |
| | Examiner Tom Y. Lu | Art Unit 2624 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-12 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 and 15-17 is/are rejected.
- 7) ☒ Claim(s) 3-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment and written response filed 04/03/2008 has been entered and considered.
2. Claims 1, 13 and 14 were cancelled.
3. Claims 2, 4, 10, 11 and 12 were amended.
4. Claims 15-17 were added.
5. Claims 2-12 and 15-17 are pending.

Response to Arguments

6. Upon cancellation of claims 1, 13 and 14, the rejection of claims 1, 13 and 14 and their dependent claims has been withdrawn. Upon further review of specification and in light of applicant's arguments, the new independent claims 15-17 have been amended to incorporate new limitation of "mechanical diaphragm", and a new set of rejection is made in view of Buzug et al (U.S.P.N. 6,445,771 B1) and Van Eeuwijk (U.S.P.N. 5,960,102).

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claim 17 is rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility. It is unclear as to what subject matter the claim is directed to? a method, process or system?

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 17 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The subject matter in the claim is unclear. Please explain.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

9. Claims 15-17 are rejected under 35 U.S.C. 102(a) as being anticipated by Buzug et al (“Buzug” hereinafter) (U.S. Patent No. 6,445,771 B1).

- a. As per claim 15, Buzug discloses a computer-assisted method for detecting edges of a mechanical diaphragm in an image of a subject, caused by gating radiation for producing the image with the mechanical diaphragm before said radiation penetrates the subject, said image containing a polygon formed by said edges of said mechanical diaphragm and also containing anatomical image edges representing anatomy of the subject (see abstract and figure 1), comprising the steps of: supplying image data (radiation image, column 3, line 34) representing said image to a computer (image processing unit 4, column 3, line 34) together with information (patterns, column 3, line 35) describing said closed polygon (figure 4); and in the computer, automatically analyzing said image data to detect all image edges in the image, and automatically distinguishing said edges of said

mechanical diaphragm in said image data from said anatomical image edges using said information describing said polygon (column 4, lines 1-16).

- b. As per claim 16, Buzug discloses a computer-readable medium encoded with programming instruction, said medium being loadable into a computer supplied with image data of a subject (image processing unit 4 is a computer, which inherently contains a computer-readable medium storing the image processing instructions), said image data being produced by irradiating the subject with radiation gated by edges of a mechanical diaphragm before the radiation penetrates the subject, said image containing a polygon formed by the edges of the mechanical diaphragm, and also containing anatomical image edges representing anatomy of the subject, said programming instructions causing the computer to: receive said image data together with information describing said closed polygon; analyzed said image data to detect all image edges in the image; distinguish the edges of said mechanical diaphragm in said image data from the anatomical image edges using said information describing said polygon; and include an accurate representation of the edges of said mechanical diaphragm in said image data (see explanation in claim 15 above).

- c. As per claim 17, see explanation in claim 15.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 2, 15, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Eeuwijk et al (“Van Eeuwijk” hereinafter) (U.S. Patent No. 5,960,102).

- a. As per claim 15, Van Eeuwijk discloses a computer-assisted method for detecting edges of a mechanical diaphragm in an image of a subject , caused by gating radiation for producing the image with the mechanical diaphragm before said radiation penetrates the subject, said image containing a polygon formed by said edges of said mechanical diaphragm and also containing anatomical image edges representing anatomy of the subject (see abstract and figure 1), comprising the steps of: supplying image data (column 12, lines 6-7) representing said image to a computer (image processor 7, column 12, line 8) together with information (column 9, line 2, transition-points) describing said closed polygon (figure 4); and in the computer, automatically analyzing said image data to detect all image edges in the image, and automatically distinguishing said edges of said mechanical diaphragm in said image data from said anatomical image edges using said information describing said polygon (column 4, lines 1-16; column 9, lines 17-22).
- b. As per claim 16, see explanation in claim 15; the examiner notes Van Eeuwijk teaches the image processor in figure 5 is a computer system, which inherently contains a computer-readable medium storing programming instructions for carrying out feature steps of claim 15.
- c. As per claim 17, see explanation in claim 15.
- d. As per claim 2, see column 9, lines 38-42.

Allowable Subject Matter

11. Claims 3-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Y. Lu whose telephone number is (571) 272-7393. The examiner can normally be reached on 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on (571)-272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tom Y Lu/

Primary Examiner, Art Unit 2624